

Ostial Corporation  
510(k) Notification: Flash-C PTCA Balloon Dilatation Catheter

OCT 11 2012

## SECTION 5.0: 510(K) SUMMARY OF SAFETY AND EFFECTIVENESS

### A. Submitter Information

Submitter's Name:	Ostial Corporation
Address:	510 Clyde Avenue Mountain View, CA 94043
Telephone:	650-903-9100 x 232
Fax:	650-903-9119
Contact Person:	Kaitlin von Hoffmann Clinical and Regulatory Associate
Date of Preparation:	July 20, 2012

### B. Subject Device

Trade Name:	Flash-C PTCA Balloon Dilatation Catheter
Common/Usual Name:	Balloon Catheter
Classification Name:	Catheters, Transluminal Coronary Angioplasty, Percutaneous (21 CFR 870.5100, Product Code LOX)

### C. Predicate Device Name(s)

#### Primary Predicate:

Trade Name(s):	Maverick XL Monorail PTCA Dilatation Catheter, P860019/S183
Classification Name:	Catheters, Transluminal Coronary Angioplasty, Percutaneous (21 CFR 870.5100, Product Code LOX)

#### Secondary Predicate:

Trade Name(s):	Flash-C PTCA Balloon Dilatation Catheter, K113775
Classification Name:	Catheters, Transluminal Coronary Angioplasty, Percutaneous (21 CFR 870.5100, Product Code LOX)

### D. Device Description:

The Flash-C PTCA Balloon Dilatation Catheter is indicated for balloon dilatation of the stenotic portion of a coronary artery or bypass graft for the purpose of improving myocardial perfusion. The Flash-C PTCA Balloon Dilatation Catheter is also indicated for the post delivery expansion of balloon expandable stents within the coronary vasculature. The Flash-C PTCA Balloon Dilatation Catheter is a .014" guidewire-compatible, rapid exchange (RX) angioplasty balloon catheter with proximal anchoring and a working length of 135cm. The Flash-C PTCA Balloon Dilatation Catheter uses a dual balloon design that features a compliant anchoring balloon, which prevents distal migration of the balloon during angioplasty. The second semi-compliant higher-pressure balloon allows for luminal dilatation of *de novo* lesions and post deployment stent expansion.

### E. Intended Use:

The Flash-C PTCA Balloon Dilatation Catheter is indicated for balloon dilatation of the stenotic portion of a coronary artery or bypass graft for the purpose of improving myocardial perfusion. The Flash-C PTCA Balloon Dilatation Catheter is also indicated for the post delivery expansion of balloon expandable stents within the coronary vasculature.

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**F. Summary of Similarities and Differences in Technological Characteristics, Performance and Intended Use:**

The purpose of this Traditional 510(k) is to seek an expanded indication for six of the Flash-C PTCA Balloon Dilatation Catheter models cleared by 510(k) #K113775 on June 29, 2012.

In accordance with the current thinking of the FDA as reflected by The 510(k) Program: Evaluating Substantial Equivalence in Premarket Notifications [510(k)] Draft Guidance dated December 27, 2011, Ostial Corporation is claiming two predicates for the subject device. The expanded indication for the subject Flash-C PTCA Balloon Dilatation Catheter is consistent with the overall intended use of the predicate devices, namely balloon dilatation of a coronary artery, bypass graft or stent.

Substantial equivalence was established between the first iteration of the Flash-C PTCA Balloon Dilatation Catheter and the primary predicate Maverick XL Monorail PTCA Balloon Dilatation Catheter via the original Traditional 510(k) for the device product line, #K111284 cleared on August 17, 2011. The expanded indications for use for the Flash-C PTCA Balloon Dilatation Catheter is identical to the Maverick XL Monorail PTCA Balloon Dilatation Catheter. The Maverick XL device is indicated for balloon dilatation of the stenotic portion of a coronary artery or bypass graft for the purpose of improving myocardial perfusion. The Maverick XL balloon catheter is also indicated for the post delivery expansion of balloon expandable stents. With respect to the subject device, the Maverick catheter features equivalent indications for use, design, packaging, fundamental technology, manufacturing and sterilization.

The secondary predicate Flash-C PTCA Balloon Dilatation Catheter was cleared with an indication that is a subset of the proposed expanded indication. The indications for use are being modified to add an indication for the post delivery expansion of balloon expandable stents within the coronary vasculature. The predicate and subject Flash-C PTCA Balloon Dilatation Catheters are the same device. No design modifications or changes to packaging, manufacturing or sterilization have been made since the clearance of the predicate Flash-C device.

The subject device and predicate devices are substantially equivalent in terms of intended use, fundamental scientific technology, target population, and operating principles.

**G. Performance Data:**

Biocompatibility testing has previously been completed on the Flash-C PTCA Balloon Dilatation Catheter. Requirements for biological evaluation of the proposed device were based on the Blue Book Memorandum issued on May 1, 1995, Use of International Standard ISO-10993, "Biological Evaluation of Medical Devices, Part 1: Evaluation and Testing." The biocompatibility test results show that the materials used in the design and manufacture of the components of the proposed device are non-toxic and non-sensitizing to biological tissues consistent with its intended use. The following biocompatibility tests were completed:

- ISO MEM Elution Assay
- ASTM Hemolysis Assay
- Complement Activation C3a and SC5b-9 Assay
- Thromboresistance Evaluation
- Materials Mediated Rabbit Pyrogen
- ISO Guinea Pig Maximization Sensitization
- ISO Acute Systemic Injection Test
- ISO Intracutaneous Reactivity Test
- Pyrogen (LAL) Chromogenic

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The Flash-C PTCA Balloon Dilatation Catheter was evaluated using the following in-vitro performance bench testing to confirm the performance characteristics as compared to the predicate device:

- Balloon Crossing Profile
- Catheter Shaft Diameter
- Catheter Working Length
- Catheter Inner Diameter
- Angioplasty Balloon Rated Burst Pressure
- Anchoring Balloon Burst Volume
- Angioplasty Balloon Compliance
- Balloon Inflation Time
- Balloon Deflation Time
- Angioplasty Balloon Rated Burst Pressure (in Stent)
- Anchoring Balloon Burst Volume (in Stent)
- Angioplasty Balloon Fatigue
- Anchoring Balloon Fatigue
- Catheter Bond Strength
- Catheter Tip Pull Strength
- Catheter Torque Strength
- Simulated Use
- Flexibility and Kink Resistance
- Radiopacity
- Angioplasty Balloon Fatigue (in Stent)
- Anchoring Balloon Fatigue (in Stent)

All test results demonstrate that the device materials, the manufacturing process, and the design for the Flash-C PTCA Balloon Dilatation Catheter met the established specifications necessary for consistent performance according to its intended use.

**H. Conclusions:**

The Flash-C PTCA Balloon Dilatation Catheter met all predetermined acceptance criteria of design verification and validation as specified by applicable standards, test protocols, and/or customer inputs. The Flash-C PTCA Balloon Dilatation Catheter is substantially equivalent to the legally marketed predicate devices and does not raise any new safety or effectiveness questions.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room -WO66-G609  
Silver Spring, MD 20993-0002

OCT 11 2012

Ostial Corporation  
c/o Ms. Kaitlin von Hoffmann  
510 Clyde Avenue  
Mountain View, CA  
94043

Re: K122178

Trade/Device Name: Flash-C PTCA Balloon Dilatation Catheter  
Regulation Number: 21 CFR 870.5100  
Regulation Name: Standard Percutaneous Transluminal Coronary Angioplasty (PTCA)  
Catheter  
Regulatory Class: Class II  
Product Code: LOX  
Dated: July 20, 2012  
Received: July 23, 2012

Dear Ms. von Hoffmann:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must

comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



*for* Bram Zuckerman, M.D.  
Director  
Division of Cardiovascular Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

Ostial Corporation  
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**SECTION 4.0: INDICATIONS FOR USE STATEMENT**

510(k) Number: K122178  
Device Name: Flash-C PTCA Balloon Dilatation Catheter  
Indication For Use: The Flash-C PTCA Balloon Dilatation Catheter is indicated for balloon dilatation of the stenotic portion of a coronary artery or bypass graft for the purpose of improving myocardial perfusion. The Flash-C PTCA Balloon Dilatation Catheter is also indicated for the post delivery expansion of balloon expandable stents within the coronary vasculature.

Prescription Use X  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)



(Division Sign-Off)  
Division of Cardiovascular Devices

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